

What is claimed is:

1 A speaker system for attachment to an inner surface of a
2 helmet, said speaker system comprising a piezoelectric film speaker
3 functioning as a main surface, oscillating in response to an input signal
4 and having a peripheral edge thereof supported by a frame having a
5 center opening.

1 2. The speaker system of claim 1, wherein the frame supports
2 the piezoelectric film speaker in a curved state.

1 3. The speaker system of claim 1, wherein the frame is
2 constituted by a pair of joined frame pieces, and the piezoelectric film
3 speaker has a peripheral edge held by the pair of frame pieces. *don't have*

1 4. A helmet including the speaker system defined in claim 1,
2 said speaker system being fixedly attached on an inner surface of a shell
3 of said helmet.

1 5. The helmet of claim 4, wherein the speaker system is fixedly
2 attached on the inner surface of the helmet shell using a detachable
3 fastener.

1 6. A piezoelectric speaker comprising:
2 a frame having an opening therein;
3 a piezoelectric film located on one side of said frame and covering
4 said opening;
5 a laminating film attached to said one side of said frame and
6 covering said piezoelectric film; and
7 a fastener secured to said laminating film for fastening said
8 piezoelectric speaker to an inner surface of a helmet.

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9 Sub A 7. The piezoelectric speaker according to claim 6, wherein said
10 frame is substantially rectangular.

1 8. The piezoelectric speaker according to claim 7, wherein said
2 frame has a length dimension and width dimension, said length dimension
3 being larger than said width dimension, and wherein said frame is curved
4 along said length dimension.

1 Sub A 9. The piezoelectric speaker according to claim 8, wherein a
2 curvature of said frame has a radius of curvature in a range of 210mm to
3 360mm.

1 10. The piezoelectric speaker according to claim 6, wherein said
2 fastener is a hook-and-loop fastener.

1 11. A helmet including the piezoelectric speaker defined in claim 6,
2 said piezoelectric speaker being fixedly attached on an inner surface of a
3 shell of said helmet.

1 12. A piezoelectric speaker comprising:
2 a first frame member having a plurality of claws extending therefrom;
3 a second frame member having an opening therein and a plurality of
4 recesses therein for receiving said plurality claws to affix said first frame to
5 said second frame;
6 a piezoelectric film located between said first frame member and said
7 second frame member and covering said opening; and
8 a fastener secured to said first frame member for fastening said
9 piezoelectric speaker to an inner surface of a helmet

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2 13. The piezoelectric speaker according to claim 12, wherein said
2 fastener is a hook-and-loop fastener.

1 14. The piezoelectric speaker according to claim 12, said first frame
2 including a film-receiving recess for receiving said piezoelectric film therein.

1 15. The piezoelectric speaker according to claim 12, wherein said
2 frame is substantially rectangular.

1 16. A helmet including the piezoelectric speaker defined in claim 12,
2 said piezoelectric speaker being fixedly attached on an inner surface of a
3 shell of said helmet.

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